

1978 ANNUAL REPORT

OF THE

NEW JERSEY DEPARTMENT

OF TRANSPORTATION



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LOUIS J. GAMBACCINI
COMMISSIONER

STATE OF NEW JERSEY

DEPARTMENT OF TRANSPORTATION

1035 PARKWAY AVENUE
TRENTON, N. J. 08625

December 1, 1979

Honorable Brendan T. Byrne
Governor of New Jersey

Dear Governor Byrne:

I am pleased to submit to you this report on the Department of Transportation activities during the 1978 calendar year.

The Department launched a major effort aimed at improving New Jersey's public transportation services. This included the purchase of 425 miles of commuter rail lines, the implementation of programs to rehabilitate our aging bus and passenger railroad system to increase ridership, and the creation of new administrative, planning and policy development units in the Department to coordinate programs in all modes of transportation.

In recognition of fiscal constraints and to conserve energy and protect the environment, the Department has shifted emphasis away from massive highway construction projects, concentrating instead on maintaining and improving existing highways and completing critical missing road links to reduce traffic congestion and its resulting energy waste and air pollution.

As you know, the Department also is implementing the innovative Transpac program of projects which will use \$120 million in toll revenues from the Port Authority of New York and New Jersey together with \$480 million in federal funds to provide \$600 million in public transportation improvements.

By the end of 1968, recommendations were made for a major transportation bond issue to be combined with other State and federal funds to support a \$2 billion transportation capital program for public transit, for State aid to municipalities and counties, and for state highways. This seven-year plan will bring New Jersey's transportation system, the most heavily used system in the nation, up to an acceptable standard of safety and efficiency. The bond issue proposal, in the amount of \$475 million, subsequently was passed by the Legislature and approved in referendum by the voters.

Respectfully,

Louis J. Gambaccini
Commissioner of Transportation

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January 1, 1978

Honorable William F. Byrne
Director of Law Enforcement

Dear Governor:

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POLICY ANALYSIS

The Office of Policy Analysis was established in 1978 to serve as an extension of the Commissioner's staff to advise and assist him and the Deputy Commissioner on matters pertaining to transportation policy and legislation. At year's end, it consisted of 11 persons, eight of whom were professional staff.

The Office played a significant role in assisting the Commissioner chart his transportation policy. Staff from the Office conducted an intensive analysis of the bus subsidy program and developed, in conjunction with Public Transportation staff, four reports and legislation calling for the creation of a public transit corporation. In this connection the Office conducted an in-depth review of the guarantee of Transport of New Jersey's (TNJ) pension obligations by Public Service Electric & Gas Co. This work resulted in the Commuter Operating Agency obtaining a credit toward the purchase price of TNJ for all payments made after February 1, 1979, to fund pension obligations incurred before TNJ became subsidized.

The Office also initiated work with the Port Authority of New York and New Jersey on an in-depth review of alternatives to Conrail operation of commuter rail service in New Jersey. A preliminary report is expected in mid-1979.

The State acquired 375 miles of rail properties and 130 stations under the 900-Day Option on the basis of a comprehensive report on the pros and cons of purchase prepared by the Office. The Office strongly recommended the

acquisitions. Another area of concentration was the development of a policy for leasing to municipalities of the newly-purchased rail stations, which has been presented for public review. The rationale behind that proposal was that maintenance and security for rail stations can best be provided by municipalities. Municipal control is thought likely to engender civic pride for the stations.

On the federal legislative front, the Office worked closely with the New Jersey Congressional delegation to secure an additional 20 percent in federal public transit operating assistance for New Jersey, assurance that capital funds of the Port Authority of New York and New Jersey could be used to New Jersey's maximum assistance, potential freedom from Interstate Commerce Commission regulation over subsidized interstate buses, further stability in the State's future relationship with Conrail, and assurance that Conrail would provide additional service when asked. The Office also compiled an extensive set of reports for the use of departmental managers on the outcome of 1978 federal legislation affecting the Department.

In response to federal regulations governing access for the handicapped to transportation facilities, the Office prepared testimony and analyzed the effect of federal activities upon the forthcoming purchase of 1,100 buses by the State.

In coordination with the Coalition of Northeast Governors (CONEG), the Office prepared a paper on the potentialities of the Northeast Corridor Improvement Program as an element of commercial revitalization near train stations. This has sparked considerable interest in the subject, leading to a study of joint development potentialities at Corridor station sites, with Newark serving as the pilot.

In coordination with the Northeast Corridor Commuter Rail Authorities Committee (NECCRAC), the Office has assisted the Commissioner in developing regional policy to support the increased authorizations being sought for the Corridor development program. It has also led the effort for legislative relief from financial burdens, in the form of replacement locomotives, branch traction system conversion and modification of other rolling stock, being imposed by the project upon the Department by the Corridor Project's decision to convert the electric traction system. It also is seeking further incentives for station modernization.

On highway matters, the Office has undertaken an initial review of an Interstate Highway project which is being considered for dedesignation. It has also reviewed the recommendations of the County and Municipal Government Study Commission on local road aid, has participated in the Red Tape Task Force and Bond Issue deliberations on local road aid and has composed a package of proposals for improvements in the Department's conduct of its local road aid program.

The Office has assisted in preparing materials for the Governor's Cabinet Committee on Development Policy and Projects and expects this committee to comprise a substantial portion of its work in 1979. At Governor's Counsel's request, the Office prepared a report detailing the fragmented jurisdiction among various State agencies over the subject of transportation of hazardous materials. This is expected to lead to the formation of a task force of representatives from the Departments of Labor and Industry, Energy, Environmental Protection and the Attorney General's Office to deal with this subject.

Other new areas of Office concern include review of the activities of state authorities, federal aviation legislation and federal economic deregulation of the rail and trucking industries. Liaison has been established with the Port Authority of New York and New Jersey and the New York State Department of Transportation on aviation matters and with the Department of Labor & Industry on goods movement deregulation issues. An extensive review of authorities' activities and financing is planned for 1979.

PUBLIC TRANSPORTATION

During 1978, the Department committed about half of its financial resources to providing operating assistance to bus and rail carriers. A combination of federal, state, and local funds enabled carriers to continue operating needed public transportation. A total of 24 bus carriers participated in the financial operating assistance program. Passenger rail service was provided under a contract with Consolidated Rail Corporation (Conrail). In addition, certain freight services were contracted for using federal and local funds.

The bus and rail operating assistance budget for 1978 totaling over \$122 million. Of this, nearly \$73 million was paid for rail passenger service and over \$49 million was used for bus operations.

Bus ridership on assisted carriers rose about 2.5 percent compared to 1977, while rail ridership was up 1.5 percent. Average daily rail ridership (one-way trips) during 1978 was 130,000. Average daily bus ridership (one-way trips) was about 510,000. This represents approximately 80 percent of total regular route bus ridership in New Jersey.

Rail fares and interstate bus fares were raised by an average of 10 percent and intrastate bus fares raised by 5 cents or 10 cents on October 1, 1978, to help fill the gap in operating costs.

Steps were begun to reorganize the Department's Public Transportation Services to enable Department staff to be more responsive to increased

responsibilities and broadened goals. A transit planning function was added which will enable the more short term planning studies to interface more effectively with operations planning.

New marketing and ridership development programs were initiated. The efforts will focus on cooperating with counties and localities to develop specialized "target" promotions. Development of statewide goals and a statewide public transportation marketing and information system will continue during 1979.

Encouragement of cooperative service and agreements for localized special transit services, such as elderly and handicapped persons, was expanded. The Department provides technical assistance to counties and localities which are interested in increasing the utilization of these special services. The Department also helped process specialized vehicle applications from private non-profit organizations for submission to the Urban Mass Transportation Administration (UMTA). Many of these vehicles will be equipped with wheelchair lifts.

To help marshal Department resources for certain high priority efforts, the "task force" approach was implemented. Three such groups were established:

- Task Force on New Legislation. This group, working with staff of the Office of Policy Analysis, was expected to report to the Commissioner and the Governor in early 1979 following studies of alternative institutional and financial arrangements for New Jersey's public transportation system.

- Transpac Task Force. This group was set up to develop and implement a \$600 million public transit capital program, utilizing \$480 million in federal funding and \$120 million from the Port Authority of New York and New Jersey. Public review prior to formal submission is scheduled for early 1979.
- Conrail Alternatives Task Force. This task force, in conjunction with the Office of Policy Analysis, is reviewing long term alternatives for commuter rail operations. A report will be completed during 1979.

Recognizing the valuable expertise available at the county and local levels, the Department increased its contact with local officials and professionals. A transit seminar held in September 1978 brought together more than 60 transportation officials from across the state. Several committees were formed to help the Department focus on issues of major concern to counties and municipalities.

Enrollment in the half-fare program for elderly and handicapped continued to increase during 1978. Persons 62 years of age and older, and eligible handicapped persons, can ride for reduced fare on most buses and trains in New Jersey on Saturdays, Sundays, holidays, and off-peak weekday hours. Enrollment increased by about 31,000 to 443,000 by the end of 1978.

A Transit Effectiveness and Efficiency (TEE) Study, begun in 1978 and to be completed in 1979, will inventory all bus routes in the State. The study will identify major trip points and will produce a basis upon which to improve routes and service, thus providing more efficient service to the public.

The Department continued to closely monitor those carriers receiving operating assistance. A new, more detailed operating assistance application was prepared, and an improved method of analysis was instituted to help the Department determine the actual needs of contract carriers. Several negotiation sessions were held with each carrier in order to improve the staff's awareness of the carriers' problems and to familiarize each carrier with the Department's expectations.

Service needs of users and potential users change constantly, and the Department strives to improve the services based on both local requests and Department transit planning work. One example was the extension of service on Middlesex Bus Company's Route No. 18 from New Brunswick to Old Bridge, expected to add 8,300 annual passenger trips.

Bus shuttle service was instituted between Elizabeth and Bayonne when the Cranford-Bayonne rail service was discontinued in August. This new shuttle service reduced annual operating expenses by approximately \$1 million as compared to the rail shuttle. Middlesex Bus Company's Route No. 14 from New Brunswick to North Brunswick was extended to serve a shopping center and the Rutgers University New Brunswick campus. Also, a consultant study recommending a major revamping of Atlantic County's service was implemented.

Seasonal modifications were also implemented during the summer months to serve Lake Hopatcong, Gateway National Park at Sandy Hook, Atlantic City, and Island Beach State Park. Bergen and Morris counties instituted a special Christmas shuttle service to major shopping areas, thereby reducing local traffic congestion.

The Department financially supported the initiation of new bus services. To provide transfer abilities with the transit operator in Easton, Pa., new local public transportation service was instituted in the Phillipsburg area. The response to this new service was good. Local service also was started in Salem County through the County's Improvement Authority.

A deferred maintenance program totaling over \$350,000 was undertaken to rehabilitate more than 50 of Lincoln Transit Company's bus fleet. This program was instituted following commuter requests and the Department's concurrence. Also, a major effort was continued during 1978 to install air conditioning in 293 state-owned buses.

The Department redoubled efforts to obtain maximum federal support for both operating and capital assistance programs during 1978. A grant application providing for more than \$50 million for operating assistance to bus and rail carriers in the northeastern area of the State was filed with UMTA two months earlier than in previous years. Preparation of applications for the Camden, Atlantic City and Trenton urbanized areas were also completed two months earlier. These actions will enable the Department to receive federal funds as early as possible.

Two amended applications were submitted to UMTA for capital assistance for electrification improvements to portions of the North Jersey Coast Line. By the end of the year, UMTA had given approval to one of the applications, thereby increasing the amount of funds available for the project to \$69 million. Two other grant application amendments were submitted to UMTA for the reelectrification of the Morristown Line. By the end of the year, the total approved funding was \$199 million.

UMTA approved a grant application for more than \$26 million to provide the federal share of "emergency" operating assistance for all passenger rail services in the State as well as for critical long overdue maintenance work on tracks, bridges, stations, and rolling stock.

Major steps in the rehabilitation and improvement of commuter rail passenger service continued through the Commuter Operating Agency (COA). In September, the Agency exercised its "900-day option" to purchase certain rail lines that are not essential to Conrail freight operations.

Together with about 50 miles previously purchased, the State, through the COA by year's end owned approximately 425 miles of commuter rail lines. These purchases ensure greater State control and the ability to provide improved service for commuters.

In conjunction with the exercise of the "option," the Department began developing a Station Policy to be utilized by the COA. Under the proposed policy, localities would be encouraged to lease rail stations at a nominal fee. Localities would provide maintenance and would be able to offset costs through approved rental and parking fees. The Department feels that local control of station properties will increase local pride in these valuable assets while also providing better facilities for commuters.

The year saw increased rehabilitation and overhaul of State-owned rail rolling stock, including 24 locomotives used in commuter push-pull service on Conrail's Hoboken Division. Sixteen overhauls were completed during 1978 while the balance were scheduled to be completed during the first quarter of 1979.

The Department also contracted for the remanufacture of 11 locomotives on the North Jersey Coast Line (NJCL) through joint federal and state funding. Increased locomotive reliability is expected to measurably reduce schedule delays on this line.

The Department acquired 31 stainless steel passenger coaches from Penn Central trustees and had the interiors completely refurbished during 1978 for assignment to service on the NJCL to replace antiquated equipment. The heating and air conditioning systems on these cars were completely renewed.

Severe winter weather early in 1978 brought a rash of failures on the electrified lines of Conrail's Hoboken Division. The Department conducted a thorough investigation of the multiple-unit cars and made several modifications to help reduce future propulsion failures. As a result, the service availability of this equipment was increased by more than 50 percent compared with the earlier failure rate. A program of interior painting and reupholstering on these cars of 1929-30 vintage was initiated to increase passenger comfort until replacements are placed in service after reelectrification is completed.

In order to improve service and in response to numerous patron requests, the Department approved the installation of a toll-free telephone information center at Conrail's Newark headquarters. The center is staffed from 6:00 a.m. to midnight daily, providing riders with up-to-date information concerning schedules, routings, fares, and operations. The center has the added capability of announcing schedule changes at all stations and platforms on the NJCL. The toll-free number is 800-242-0212.

Substantial reconstruction of the Manasquan and Navesink River Bridges was initiated during 1978. Structural work on the Manasquan Bridge was completed with track replacement continuing into 1979. Once this work is completed,

normal operational speeds can be resumed over the bridge. On the Navesink River Bridge, structural rehabilitation to ensure continued safe operations was begun in 1978 and continues through 1979.

A major program of track maintenance included the completion of some 61 miles of improvements such as surfacing, ballast cleaning, installation of new ties, new welding, and track realignment. These improvements will contribute to serviceability, comfort and safety for commuters. The work was performed on portions of the Raritan Valley, North Jersey Coast, Boonton, and Bergen County Lines.

Standby electrical service was added at the Bay Head Yard on the NJCL to ensure full-charge maintenance batteries which provide the lighting and air conditioning needs on certain coaches. Nearly 9,000 new ties were installed and related track was surfaced at the yards in Hoboken and Waldwick and in Suffern, N.Y., to correct deteriorated track conditions in an effort to improve overall riding quality.

In cooperation with Conrail, switch heaters on all passenger rail lines were inspected and replaced as required. This will minimize delays due to frozen switches.

A major UMTA-assisted rehabilitation of the Metuchen Station on the Northeast Corridor was initiated in the fall. The work includes construction of new high-level platforms with ramps and stairways, a new pedestrian overpass, and improved drainage and sewer system. The historic station building and waiting shelter will undergo extensive restoration. Completion of the project, scheduled for late 1980, will provide safer, more direct access to facilities and trains, particularly for the elderly and handicapped.

Rehabilitation of the New Brunswick Station was completed and included roof repair; repainting; repairs to the platforms, stairs, floors and walls; new lighting and graphics; and a passenger information board. At the close of the year, rehabilitation of the Waldwick Station was nearly complete, including platforms and lighting, an expanded parking lot with improved drainage and lighting, and heated waiting shelters. The expanded parking lot was dedicated in the Fall.

The first phase of the rehabilitation and restoration program for the historic Hoboken Terminal was completed in the Fall. This work consisted of the construction of a new copper roof, installation of skylights and related work to ensure the preservation and safe utilization of this nationally significant structure.

Three transit planning studies were initiated to help develop capital improvement projects. A rail station and bus terminal modernization study will examine each rail station and major bus terminal in New Jersey. A set of comprehensive standards for station facilities will be developed and priorities will be established. Results of the study will provide the Department with invaluable guidance in the allocation of scarce resources for station improvements.

A rail equipment maintenance facility study was started by a consultant to develop alternative requirements for the existing and future rail passenger car fleet.

A special corridor study was initiated to develop improvement plans for the Bergen County, Pascack Valley, and Main Line of the Hoboken Division. This study will consider operational and scheduling changes designed to encourage

greater use of commuter trains and decrease the use of the automobile for commutation in the metropolitan area. These lines are enjoying increased usage and the study results will enable the Department to respond to the increased demands.

ENGINEERING AND OPERATIONS

For the Engineering and Operations area of the Department, 1978 was a year of transition. There was an accelerated broadening of scope in activities to include increasing involvement in the public transportation area--bus, rail and air--in addition to a rethinking of past philosophy on the establishment of priorities. Highway improvements were considered in terms of their contributions to achieving an integrated transportation system. Multi-modal solutions to the State's transportation needs, such as park/ride facilities, were pursued, and former tendencies to differentiate projects as strictly "mass transit" or "highways" were set aside.

The engineering expertise and manpower of units reporting to the Director of Engineering and Operations frequently provided essential support for the Department's expanding public transportation responsibilities. This more diversified use of available engineering talent is expected to increase dramatically as the Department strives to develop a more efficient and balanced transportation system in the State.

Although several major projects were advertised in 1978 to close missing links in the highway system, highway investment priorities also were being redirected away from major construction on new alignments toward rehabilitation and safety upgrading of existing transportation facilities. For example, while the number of construction contracts advertised for bid in 1978 increased substantially over the prior year, the number of major projects (those costing more than \$8 million) decreased by more than 60 percent. This trend away from major projects to numerous smaller safety improvements placed additional demands on existing forces, since the development of a smaller project requires virtually the same processing steps as their larger counterparts.

The Design Services Unit established a new milestone during 1978 with the preparation of plans and specifications for 94 contracts having a construction value of \$101.1 million. This was the largest number of projects ever advertised for construction in a one-year period. This expanded program was accomplished solely through increased productivity efforts and with no additional personnel.

Several major bridge and roadway projects, such as the \$10.5 million reconstruction of the General Pulaski Skyway bridge deck and improvement to its approaches, were included in the 94 projects. Project limits extended 3.5 miles from Jersey City-Kearny to Newark, and involved numerous safety improvements, including the installation of updated signing, guiderail, and barrier curb. Contracts also were awarded for the reconstruction of the Manasquan and Navesink River Bridges in Monmouth County.

Among the significant highway projects advertised for construction was one of the last remaining easterly portions of Interstate Route 195 in Monmouth County. Completion of the final segment will enable motorists in Central New Jersey to travel from the Delaware River to the Atlantic Ocean, with no intervening intersections of traffic lights.

Design effort continued on the completion of other missing links in the Interstate System. Particular care has been taken to minimize potential adverse impacts by the five-mile segment of Interstate Route 78 that would pass through the Watchung Reservation in Union County. Portions of the highway are being designed to be cut into the terrain with a cover constructed over the roadway. Landscaping then will return the area to its native state. Design input, necessary for the progression of the Route 287 Environmental Impact, was provided. Completion of the remaining 18 mile section of this vital circumferential highway around the New Jersey-Metropolitan New York area will produce immediate benefits in reducing travel time, congestion on local roads, and fuel presently wasted in bumper-to-bumper traffic on local and State roads.

In conjunction with the Railroad-Highway Grade Crossing Program (previously administered by the Department of Public Utilities), the Utilities Bureau made in-depth inspections of 3,382 grade crossings in the State to determine surface conditions and adequacy of protection at each location. Using the data developed, a priority system will be established for the grade crossing elimination, rehabilitation, and improvement program. Also inspected in conjunction with railroad personnel were 2,639 railway grade separation structures. The public is the direct beneficiary of both of these programs, since effective warning signals and adequately maintained grade crossings, as well as structurally sound bridges, result in a safer and more pleasant environment for railway, vehicular and pedestrian traffic.

The Design unit's structural engineering section inspected 2,114 bridges on the State Highway System, 98 percent of the total number to be inspected. A report and rating of the condition of each bridge was prepared. The section also administered and coordinated the County Bridge Inspection Program, and a significant change in Federal regulations during 1978 required the inspection of an additional 2,160 bridges located on roadways which are not on a federal-aid system. Together with other expanded responsibilities, the section's work load quadrupled during the year.

The number of evaluations made by the geotechnical engineering unit concerning structural foundations more than doubled during the second half of 1978 as a result of the greater number of smaller maintenance-type projects and direct involvement in railroad electrification projects. These evaluations, involving foundations for the catenary structures (supports for the overhead electrical wires) and proposed power stations on the Erie-Lackawanna project, will continue in 1979, since the electrification project will require 666 individual foundations of six different types. Although a major amount of staff time will be required for field reviews during the foundation construction, the additional work is expected to be carried out with existing personnel.

Engineering staff reviewed, completed and forwarded 3,370 maps and agreements for parcels to be acquired by the Right of Way Division. This reflects an increase in activity of more than 450 percent over the prior year with no increase in staff. Survey support was provided on the Morristown Line (Erie-Lackawanna) and North Jersey Coast Line (New York and Long Branch) electrification projects. Assistance also was provided for a Division of Commuter Services survey of 400 bus routes in the northeast section of the State. In the aeronautics area, five airports were surveyed and photogrammetric services were obtained to map 19 additional airports in New Jersey.

Several snow and ice storms of unusual intensity and long duration required the full use of all of the Department's resources to combat the storm conditions and keep highways open. State forces were mobilized a total of 158 times in the winter of 1977-78 as compared to 116 for the prior snow season. Many of these mobilizations required the use of contracted equipment to supplement the Department's maintenance fleet. Snow accumulations of 45.8 inches were recorded compared to 23.2 inches recorded in the prior year. New Jersey's average annual snow accumulation is 25.3 inches. While there was an unusually large number of ice storms accompanied by sleet and freezing rain, these did not contribute to the measured snow accumulation. About 55,000 tons of salt, calcium chloride, and pre-mix material was used compared to 39,000 tons of chemicals used the previous year. Total snow costs for the season were \$9.5 million, including overtime, contractor services and material purchases.

The Department's Equipment Bureau installed 261 air conditioning units on operating buses and returned them to service. Ten diesel locomotives were rebuilt under the inspection of the Bureau of Equipment and placed in use, and 27 railroad coaches were completely rebuilt, including interior refurbishing, with repairs to heating, cooling and electrical systems, and returned to service on the New York and Long Branch. Equipment personnel also inspected and accepted 127 multiple unit cars for use on the Erie-Lackawanna.

In conjunction with the Department's recently instituted minority business enterprise (MBE) Program, the Office of Compliance developed contract monitoring procedures and initiated field reviews to ensure that prime contractors award subcontracts to minority contractors in accordance with the minority utilization goals established for each project. The intent of the MBE Program is to increase participation of minority contractors in the construction industry.

The Labor Compliance Section of the Office of Compliance uncovered wage and hourly benefit deficiencies on DOT construction projects totaling \$122,094. About 232 employees of contractors who worked on Department construction projects will receive repayments from this amount.

One of the responsibilities of the Transportation Department's Local Aid Unit is the administration of federal and State programs available to counties and municipalities for road and bridge improvements. During 1978, more than \$27.6 million in federal-aid funds were authorized for such projects.

To facilitate the use of funds previously allotted to but not used by local governments under the state-aid program, a new regulation was adopted and incorporated into the New Jersey Administrative Code. The regulation stipulated that all outstanding state-aid allotments which were not committed to an award of contract by March 1, 1979 would be withdrawn and made available for redistribution. This resulted in a substantial increase in activity on the part of local governments and prompted the completion of 93 projects improving 40 miles of local roads at a cost of \$2.1 million. In addition, 62 projects having a value of \$4.9 million were awarded for construction.

The Right of Way Division acquires and manages property required for transportation facilities, including highways, bus, rail and air. Right of Way output is directly related to the Department's "capital construction input," since projects must have land on which to be constructed. In New Jersey, the most densely populated State, Right of Way acquisition involves many socio-economic considerations and complex business and family relocations.

In 1978, the Right of Way Division completed and made available 126 projects for construction advertising, including 53 local aid projects and 73 on the State highway system. Programming was initiated for Route 23 in Wayne, and from the Route 46-Interstate Route 80 Interchange northly to Alps Road; the initial sections of Route 169 in Hudson County; the Woodcrest Station ramps in Lawnside and Cherry Hill; and 20 miles of Route 55 from Route 40 (vicinity of Millville) to Route 42 (vicinity of Deptford and Woodbury). Approximately 2,000 parcels of land having an estimated value of \$26 million must be acquired for this 20 mile portion of highway. When constructed, this project will complete the last gap of the entire Route 55 Freeway system.

Right of Way staff began the process of acquiring property needed in conjunction with the Erie Lackawanna Electrification Project extending from Morris to Hudson Counties; for Route 81, a high priority project designed to provide improved access to Newark International Airport; and acquisition of light density rail lines.

One of the collateral activities of the Right of Way Division involved the Department's on-going Highway Beautification Program. Having previously cited and caused the removal of more than 18,000 signs which had been illegally erected on State highway roadsides, the Division directed its attention to surveying all signs along Interstate highways for compliance with the requirements of the Highway Beautification Act of 1965. All of these signs were subsequently brought into full conformity with federal regulations, qualifying the State for a bonus from the federal government.

The same law which provided for the bonus payments also required the State to remove, through purchase, all legally erected signs along State highways which were on property zoned for other than industrial or commercial use. Consequently, the Right of Way forces surveyed every sign along State highways and identified approximately 500 which must be acquired. The Federal Highway Administration will pay 75 percent of the acquisition costs.

The Right of Way Division was again called on to provide specialized expertise on a contract basis to other State agencies, including the State Attorney General's Office in relation to title frauds and criminal investigations. Reimbursement was made to the Department for services rendered to these agencies. Since most Right of Way projects are federally aided, there is federal reimbursement of the proportionate cost for all activity on federal aid projects, greatly reducing the Department's outlay of critical State Funds for the Division's operation.

The Division continued its Green Acres appraisal and registration activities on behalf of the Department of Environmental Protection, as mandated by a 1976 Governor's Executive Order. A total of 208 separate Statewide Green Acres Local Aid projects were completed involving more than \$50 million of Green Acres grant authorization approvals. These activities were later expanded at the request of the Department of Environmental Protection to include title searching and appraisal of properties in the Pine Barrens Preservation Program.

The Bureau of Traffic Engineering was instrumental in obtaining a Federal Traffic Safety Demonstration Grant for the computerization of the Somerville Circle, where traffic volumes greater than the circle's capacity has resulted in congestion and delays. A central computer, gathering and continuously analyzing data from sensors buried beneath the roadway, will control traffic via traffic signals on the roads approaching the circle. This will provide gaps in the circle traffic, as needed, to enable vehicles on approach roads where traffic is heaviest to enter the flow, thereby reducing delays.

Close administration was provided for two other computerized traffic control projects, being designed by consultants, the "Newark Airport Interchange Surveillance and Control System" and the "Eight Northeast Counties Route Guidance System." When fully operational, these systems will use state-of-the-art traffic control techniques to immediately detect accident locations, summon emergency help, and reroute vehicles around the accident site.

The Office of Ride Sharing continued its marketing activities with New Jersey firms in order to generate interest in the ride sharing concept. As of the end of 1978, the Ride Sharing Office had provided computer-matched carpool lists to 135 employers in New Jersey, affecting more than 50,000 employees. Plans were also initiated to dramatically expand the activities of the Office of Ride Sharing to include other areas such as park-and-ride, express or special bus service and bus route modification. The energy crisis will result in greater emphasis on the workings of this unit, and the Office is serving as advisor to an interdepartmental task force on ride sharing and will implement decisions of the task force to cope with the increased activities anticipated in this area.

During the past year, the entire highway system was surveyed with sophisticated equipment which enabled Department engineers to determine the skid-resistance of the pavement. Those sections of highways with low skid resistance are candidates for non-skid overlay projects. The data developed from the survey was instrumental in securing \$1.4 million in Federal Highway Safety Funds for these roadway improvements and has had a significant effect on the overall reduction of traffic accidents Statewide. It should be noted that New Jersey is now the "safest State in the Nation" in terms of traffic fatalities. The

success of this testing program prompted the New Jersey Highway Authority to request the Department to skid test the entire length of the Garden State Parkway, and the program was subsequently expanded to include testing of county roads in Sussex, Burlington and Ocean Counties.

AVIATION

It was a year of significant accomplishment in the sense that a major airport, Bader Field in Atlantic City, was saved and its future enhanced by a federal commitment for capital improvement. Seven new public-use airstrips, three private facilities and 27 helistops were licensed. Eleven privately owned public-use airports identified for retention in the State Airport System Plan may be sold and converted to other use purposes. It is in this area that we face our greatest challenge.

The number of aircraft registered in New Jersey and fees collected appears to be increasing at a rate of about six percent a year. The 3,394 aircraft registered brought in fees amounting to \$153,172, half of which was returned to the municipalities in which the aircraft are based.

New Jersey is experiencing a substantial growth in rotary winged facilities and a slight decline in airport facilities as shown by the number of licenses issued. The aircraft registration system provides accurate information for airport systems planning, programming and policy making. It includes the number of take-offs and landings, the number of hours flown and detailed information on the airplanes registered. A total of 531 aeronautical facilities were licensed, an overall increase of 29, reflecting an increase of 32 heliport or helistop licenses and a loss of three private aviation facilities. The number of licensed fixed base operators increased by 18 to a total of 209, and the number of fixed base operations, including such activities as air instruction and aircraft repair shops, rose by 71 to 341.

Under the federal Airport Development Aid Program, some \$8,904,500 was provided to New Jersey by the Federal Aviation Administration (FAA) for construction projects for publicly-owned airport facilities. Of the total, \$7,480,470 went to the Newark International and Mercer County air carrier airports. Reliever airports at Teterboro and Linden received \$753,215.

This federal funding is available under current legislation only to the 14 publicly-owned, public-use airports. Privately-owned, public-use airports are not eligible for funding assistance.

Efforts by the Department to resolve various safety, environmental and economic concerns has assured the use of Bader Field Airport, Atlantic City, for aviation operations for at least the next five years.

The primary runway at the field is to be improved, the crosswind runway realigned and reconstructed and the third runway closed under an agreement developed with the cooperation of the FAA, Department of Environmental Protection, Atlantic County and Atlantic City. The cost of initial development is estimated at \$1 million.

For the first time, New Jersey is being reimbursed by the federal government for administrative work on a federal program, the FAA Airport Master Inventory Program. As a result of the inspections performed under the program, essential airport data is collected for use in pilot information publications. The FAA will reimburse the State about \$10,000 for the first year's work.

Application for a \$70,000 matching grant from the FAA for the first year of a three-year airport system planning study was completed. Approval of the grant will permit work to begin on collecting and assembling data to update the New Jersey State Airport System Plan. The 75 percent federal share for the work will be matched by 25 percent from the Department in the form of staff activities. For the first time, the military aviation facility at Lakehurst and McGuire Air Force Base will be included.

PUBLIC AFFAIRS

The Office of Public Affairs was created to expand and improve the way the Department communicates its policies, activities and programs to the public. This includes relationships with individual citizens, the news media, local governments, transportation-oriented organizations, including the many newly-formed commuter groups, service organizations, educational organizations and Department employees themselves.

The Office includes Public Information and Publications. Public Information staff handles dozens of news media contacts and general information inquiries daily along with preparation of press releases.

Publications staff has developed a variety of new printed materials designed to inform the public about the Department's programs. These new publications include Mobility, a quarterly newsletter to the public on DOT activities and issues; Rail Rider, a newsletter for train commuters; Checkpoints, an easy-to-use phone directory of the Department for use by the public; and the Synopsis Series, a series of brochures about specific programs such as elderly and handicapped, environmental responsibilities, and highway mileages.

Publications has also expanded the Transporter, DOT's monthly employee newsletter. Additions to the Synopsis Series and a newsletter for bus commuters are among activities planned in the future.

COMMUNITY INVOLVEMENT

The Office of Community Involvement broadened citizen knowledge about transportation, its problems and needs, and provided an apparatus for the citizen to offer input during the development of these issues. Public meetings and hearings, information centers, and newsletters were used to inform the public. The Office also worked with county and local officials and concerned individuals to improve their involvement in New Jersey's transportation future.

Public meetings were conducted for 51 projects. Among the notable meetings were those on plans to complete Eisenhower Parkway-Triborough Road in Morris and Essex Counties; upgrading passenger rail service for the Raritan Valley Line; improving highway access to Newark; plans to complete Interstate Route 95 through Mercer, Somerset and Middlesex Counties; plans to complete Interstate Route 287 through Morris, Bergen and Passaic Counties; electrification and improvements to the North Jersey Coast Line; reelectrification of the Morristown Line; dualization of Route 55 in Gloucester County; and locating a service road for the Hudson River Route in Hudson and Bergen Counties.

Each meeting focused on informing residents, receiving their comments, and answering questions. Local input permitted the Department to adjust several projects to make them more compatible with local needs.

Public Hearings were conducted on four projects. They included the Morristown Line, the North Jersey Coast Line, the rail lines acquired by the state and a regulation banning pedestrians, animals and certain types of vehicles from New Jersey's Interstate Highway System.

Each hearing focused on determining the local positions and recommendations. The hearing format was formal with an overall project review, followed by verbal and written statements from the public. A written transcript is kept.

Public Information Centers were conducted on improving the Routes 4 and 17 interchange in Bergen County; the Morristown Line; the North Jersey Coast Line; the proposed widening and spot realignments of Route 206 in Mercer and Somerset Counties; inventorying New Jersey's taxi, limousine, and van services; the development of the Interstate Route 78 Final Environmental Impact Statement; plans to extend Route 24 in Morris County; construction of Interstate Route 295 in Gloucester County; reconstruction of the Route 9 bridge over Nacote Creek in Atlantic County; improvements to Route 73 in Burlington County; reconstruction and resurfacing Route 27 in Middlesex County; the development of the Trenton Complex Final Environmental Impact Statement; construction of a park and ride facility in Parsippany-Troy Hills, Morris County; the Raritan Valley Line upgrade; the Newark Access Feasibility Study; and the resurfacing and island improvements to Route 206 in Mercer County.

Each information center was an opportunity for interested residents to meet informally with State representatives.

More than 100 meetings were held with mayors, county and local officials, and interested citizens. These meetings were concerned with staying abreast of an area's transportation concerns.

The Interstate Route 95 Technical Advisory Committee (TAC), a group of appointed citizens from the involved municipalities, met seven times. They reviewed technical data as it developed in preparation of the Draft Environmental Impact Statement.

An acceptance ceremony for North Jersey Coast Line locomotives was conducted at South Amboy. Commissioner Gambaccini presided and a number of officials were in attendance.

Newsletters were prepared and disseminated for 11 projects. The Hudson River Route newsletter was printed in English and Spanish, while the Newark Access Feasibility Study newsletter was in English, Spanish and Portugese.

PLANNING

The Planning Services effort in 1978 was directed toward the development of a Transportation Master Plan and the refinement of the working relationship between the Department and the various Metropolitan Planning Organizations within New Jersey.

Probably the most direct impact on Planning was its reorganization into a modal type of unit rather than a Department-wide functional unit. As part of this reorganization, certain short-range planning for Public Transportation will be carried out in the Division of Commuter Services, while all other planning for Public Transportation and Highways will remain with Transportation Planning and Research.

The present Planning staff is responsible for maintaining and updating a comprehensive master plan for transportation plans and programs throughout the State. The overall plan is multi-modal and spells out the State's long-range proposals for dealing with transportation needs.

In order to address the concerns for the future of transportation in New Jersey, the planning staff developed several short-range and long-range outlines of how the following circumstances might affect transportation:

- No growth in population,
- No growth in the supply of petroleum,
- Ending public transportation subsidies,
- A long-term trend of economic and population growth,
- A 28 percent decrease in the petroleum supply,
- Doubling the public transportation system.

It had been anticipated that a draft master plan would be published in October, 1978, however, this was deferred until a number of critical issues could be resolved.

As part of the effort to prepare a master plan, staff wrote a history of statewide land-use planning and the relationship of the master plan to the draft State Development Guide of the Department of Community Affairs. Also prepared was a report on the Department's transportation planning efforts and the coordination with planning agencies at various government levels, and an analysis of existing park-ride lots in the State, with a suggested set of procedures for establishing regional lots.

As required by federal law, New Jersey has developed a plan showing how the State will achieve the cleaner air necessary to protect the health and welfare of its citizens. Preparation of a plan, the State Implementation Plan for the Attainment and Maintenance of Air Quality Standards, known as SIP, is primarily the responsibility of the Department of Environmental Protection.

Since it is widely held that gases resulting from the use of automobiles and trucks contribute significantly to air pollution in New Jersey, the Department of Transportation was able to help extensively in development of those elements of SIP concerned with reducing pollution from mobile sources. To formulate these elements known as the "transportation control plan," the Department in 1978:

- Developed an inventory--or accounting--of pollution emissions from mobile sources;
- Held meetings and workshops with county and municipal officers and citizens to develop support for the SIP;
- Prepared promotional material for cleaner air;
- Analyzed the impacts of various measures to abate pollution.

With these efforts, the Department has embarked on the task of working toward cleaner air. The years ahead will be devoted to making the SIP workable and implementing measures needed to clean up the air.

Comprehensive transportation planning for the northeastern New Jersey urban area was conducted by the Tri-State Regional Planning Commission and for the central New Jersey urban area by the Delaware Valley Regional Planning Commission. About 93 percent of New Jersey's urban population resides in these two federal funding allocation areas, and the Department coordinates plans, programs and budget administration with those agencies.

As a result, planning certifications by the U.S. Department of Transportation for those areas assured continued eligibility for federal capital and operating funds for transportation.

Continued eligibility for capital and operating assistance funds from the Federal Highway Administration and the Urban Mass Transportation Administration also was assured for the Atlantic City, Cumberland County, Phillipsburg and Salem County urbanized areas as a result of the Department's support for the various committees of Metropolitan Planning Organizations in those areas.

Other technical planning work completed by staff included a short-term analysis of the impact of casino gambling in Atlantic City on the state transportation system, the impact of Liberty Park, Jersey City, on the transportation system as well as a similar study concerning a major Food Distribution Center in Secaucus.

The Official State Map and Guide was prepared by Department staff and made available to the public through the Division of Travel and Tourism of the Department of Labor and Industry.

Two park-ride feasibility reports, dealing with facilities at Bay Head and Toms River were completed, and a third, concerning park-ride lots at Route 46 and Beverwyck Road, Morris County, has been turned over to the Design staff for further development. As inventory of railroad parking lots was completed.

Staff efforts were concentrated on the preparation of Final Environmental Impact Statements for various Interstate highway projects. Emphasis was placed on three of them: Route 78 in the Watchung Reservation, Union County; Route 287 in Morris, Passaic and Bergen Counties; and the Routes 295, 195, 29, 129 complex in the Trenton area.

Traffic noise adjacent to Interstate highways received attention in a new program to study, analyze and make recommendations on how to mitigate this problem. Noise barriers are to be constructed based on the outcome of these studies.

Because of insufficient state funds to match available federal funds, the Department's construction program was drastically cut and the program period was reduced from 12 to 9 months. This, however, resulted in a more manageable program since its new ending date is the same as the end of the fiscal year.

Because of the large backlog of unmet transportation needs and the limited financial resources available to the Department, the Commissioner has recommended a bond issue to help finance the Seven Year Capital Improvement Program.

A study of short and long-range efforts to improve access from the State Highway System to the Newark central business district was started.

The research effort has been directed in finding and investigating ways in which the Department can upgrade and maintain their transportation systems. The ability to prolong the life of pavement, improve drainage and strengthen equipment were some of the **areas** in which research efforts were concentrated.

A demonstration of the practicality of using recycled bituminous concrete pavement began with the removal of surface asphalt from a 16-mile section of U.S. Route 1 and application of the milled material on shoulders of Route 130. Research on the skid resistance characteristics of bituminous pavements has resulted in recommendations for the use of a plentiful, less expensive aggregate on low volume roadways and on county and municipal roads. Large-scale

investigations are being conducted to improve the drainage out of highway subbases, an effort that should materially improve pavement performance by reducing damage from frost.

The large roadway signs that make use of the New Jersey breakaway supports are being investigated to further improve their performance with full-scale crash tests scheduled for 1979. Recommendations on the production and use of hot mix materials for winter pothole patching are expected to substantially increase the life of the patched areas.

A recommendation to dry paving material on an experimental basis in a revolving drum is expected to result in a reduction in highway paving costs over the long-term. Investigations also were started on how to improve traffic flow through construction sites.

Thirty reports were published and disseminated to municipal, county, state and federal agencies defining 250,000 motor vehicle accidents that occurred in the previous calendar year. The reports are considered essential in promoting highway safety, for traffic engineering and enforcement and for highway design. The accident processing system was revised, with the result that there has been a 40 percent reduction in data processing costs, which are completely reimbursed with federal highway safety funds.

Data has been collected and graphic displays have been created on how the Department's funds have been spent in the 21 counties. New Jersey's relationship to other states in either spending for transportation or receiving transportation federal dollars for transportation projects also has been compared. Specifications have been developed for assuring quality in road construction materials and methods, and statistical techniques have been taught at two Department seminars, thereby increasing the capabilities of construction personnel.

Research studies were completed and recommendations were made which will lead to the implementation of high occupancy vehicle lanes on the State-owned, 12-mile

section of the Garden State Parkway in Middlesex and Union Counties and on the Interstate Routes 80 and 95 approaches to the George Washington Bridge.

A county-wide free fare bus program in Mercer County, providing a 15 cents reduction in fares to a free fare, resulted in a 50 percent increase in ridership during the time periods of the free fare. This program, coordinated with the County, will end in 1979 and a full evaluation report will be made at that time.

Demonstration of rural bus transportation was initiated for Sussex County and negotiations were completed with the Federal Highway Administration to begin this program in the spring of 1979.

An investigation of transit crime resulted in a recommendation for a two-way radio bus communication system in the Essex County area and efforts were undertaken to design a radio-controlled traffic signal system to smooth the flow of buses. The transit crime investigation also resulted in a recommendation for a subway communication system for the City of Newark.

ADMINISTRATION

A second computer system was installed during 1978 to improve the response time for offices which are linked to the computer by on-line terminals. This acquisition enabled the Department to provide data processing services for two other State departments, the Department of Insurance and the Department of Energy, bringing the total of State agencies served by the facility to nine. This computer was acquired from another agency, which meant a substantial cost saving.

The number of female and minority employees has increased and various youth programs, which introduce students early to careers in transportation, have been expanded to improve clerical and professional opportunities for students.

New-title and re-evaluation requests submitted to Civil Service Joint Job Content Committee, including those involved in Department re-organization projects, have required an increased amount of staff time.

To alert personnel to their safety responsibilities, the Department's Safety Manual has been updated and distributed. Also, employee training has been conducted for first aid and cardiopulmonary resuscitation. Additional medical facilities have been established in various regions to treat injured employees. These facilities enable the Department to offer services, pre-employment physicals and emergency treatment to other state agencies. The Department has realized savings by placing injured employees on temporary compensation and the number of "lost time" cases has been reduced with resulting savings in the Department's salary funds.

A project scheduling plan was developed utilizing a critical path method (CPM) for the Division of Design. The input documents for Data Processing necessary to implement the CPM also were developed. Through the use of the CPM system, it is anticipated that the output of Surface Design survey crews units can be increased by approximately 75 percent without using additional manpower.

Field survey daily work schedules were reviewed with the objective of providing greater productivity through better scheduling. Proposed changes, when implemented, would provide 20 percent more available work time. Also implemented was an equipment parts inventory system to aid in determining minimum/maximum quantities needed. In order to expedite the purchasing of parts, an accelerated revolving fund system was developed to release cash more quickly for the purchase of vehicular parts.

A Department task force developed a stockroom inventory delivery scheduling program to expedite shipments from Purchase and Stores warehouse to field warehouses. Also developed and implemented was a word processing system, using a high speed electronic typewriter with data storage for preparing non-bid contracts. This system has relieved the Division of Commuter Services of the need to manually type bus subsidy contracts. The system also provides a direct service to the Office of the Commissioner and to the Assistant Commissioners for mass, personalized mailouts. A project scheduling system was developed for the Bureau of Environmental Analysis and staffing analyses were completed for various requested positions in many Departmental units. In accordance with the Governor's Reorganization Plan, an analysis of the effect of the transfer of Board of Public Utilities employees to the Department was completed and preparations were made for the transfer of personnel and the transfer of funds, effective January 1, 1979.

Consolidation within the main office building complex of nearly 900 Department employees working in rented premises at 14 locations in the greater Trenton area would cut the Department's \$750,000 annual rent bill. It also would reduce operating losses attributable to such factors as lost time and travel expenses because the organizational units are dispersed. Statistics supporting such a consolidation have been revised and updated.

Plans were formulated with the Department of Treasury to implement an "Electronic Fund Transfer" system whereby federal aid monies are transferred from the Federal Government via a computer-assisted system to the State's bank. This new system accelerated the State's cash flow position because the process makes it possible for the State to have funds two or three weeks sooner, thereby increasing interest earnings for the State.

Reviews of utility and railroad contracts to determine those which could be considered closed and of all open State Aid accounts freed up Department funds for other projects.

EQUAL EMPLOYMENT OPPORTUNITY

The Office of Equal Employment Opportunity, in making significant progress in its ongoing affirmative action efforts, established a career counseling program for maintenance employees.

The program was developed on the basis of a report by the Department's consultant, Radford Wilson, and reviews and recommendations by a task force of staff from various Divisions in the Department. The program required that four Project Specialist positions be set up, one for each regional maintenance office.

Eleven minority and female employees were graduated from Mercer County Community College with Associate in Engineering Degrees as part of the Civil Engineering Technical Affirmative Action Program.

A "five year plan" for improving the hiring, training, and promotional opportunities of minorities and females was introduced in discussions with Department managers. The plan sets up short and long-term goals for each unit in the Department.

An increased number of Minority Business Enterprises (MBEs) were at work during the year on Department projects as a result of the Goal Utilization Program, which requires a prime contractor to sub-contract five percent of the total contract cost to an MBE.

Attention was directed to the possibility of creating a "Set-Aside Program," which reserves portions of a major contract for bidding by minority contractors. The Office also is selecting consultants to provide managerial and technical assistance to MBE's. Federal Highway Administration Supportive Service Funds are requested to fund the project.

A professional training orientation program provided indoctrination to specialists and coordinators who are responsible for seeing that the Department

complies with Title VI of the Civil Rights Act, requiring non-discrimination by recipients of federal funds.

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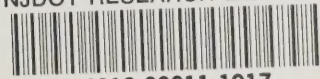
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